

STORM WATER MANAGEMENT

Sinclair Heights Background: The Heavy flow of South Snohomish County Convergence Zone precipitation has been routinely filling both Sinclair Heights detention ponds, Tracts 992 and 993 in the Fall and Spring. Figure 992-1,-2 , highlighted in white, shows the flow pattern at the inlet to the Emergency Overflow "bird cage"). Figure 993-1 shows the current remaining capacity in our second pond. The backyards and crawl spaces of our homes on the North side of Rainer View Road routinely pond precipitation in the Fall and Spring because the Vashon Lodgement, "hard pan" soil's density limits percolation beyond approximately 3 feet below the surface. The interceptor swales originally designed using weather statistics has been inadequate.

Eglemont Development: The proposed storm water management plan presented in the SDA Technical Information Report (TIR) intercepts approximately 53% of the precipitation (the 146 dwellings of an average of 60% of 845,554 sqft, + the 315,173 sqft. of road surface) falling on the site. The South Basin (89% portion of the 35 acres) is routed through piping to the South Detention pond similar to Sinclair Heights (except it will not be retained by concrete). Where before development, a large portion of the precipitation was allowed to distribute over the site. Now that water is concentrated in the South Detention Pond. The SDA TIR pond design is equipped with an Emergency Overflow (EO) "bird cage" at the top of the pond's Frop T restrictor, where the EO is allowed to settle and then flow into an open ditch (with biofiltration elements) and onto a level Spreader into Sinclair Heights Tract 998, from whence it cascades to Sinclair Heights Tract 997, and onto Sinclair Heights Tract 996. (See Figures 998-1 - 998-7; 999-1 - 999-4; 996-1 - 2). No analysis (based on data from Sinclair Heights detention ponds) of the capacity of the Sinclair Heights wetlands to percolate and pass the EO appears to have been conducted by SDA or by the City.

Sinclair Heights East Inundation Prediction: If 8 inches of precipitation falls in a month following saturation of the South Detention pond (as happens in Sinclair Heights detention ponds), 495,400 cuft. of EO water (66,232 gallons) will pass through the South detention pond restrictor, through the "bird cage" and into the level spreader ----- in a short period of time. In a 72 hour period the flow would average 919.8 gallons an hour. The saturated Sinclair Heights wetlands tracts 998, 997, and 996 will back up into backyards and crawl spaces of homes that border the wetlands and inundate 199th Ave S.E., Rainier View Road S.E. and the bike/walkway path along the South perimeter of Sinclair Heights.

Mitigation of Emergency Overflow Inundation of Sinclair Heights East:

- 1) Pipe the Eglemont South Detention pond Emergency Overflow directly to Sinclair Heights Tract 997.
- 2) Add an Emergency Overflow Pipe at the outlet of Sinclair Heights Tract 997 directly to Sinclair Heights Tract 996.
- 3) Add an Emergency Overflow Pipe at the outlet of Sinclair Heights Tract 996 directly under the Sinclair Heights bike/walkway.

RAINIER VIEW ROAD S.E. TRAFFIC MANAGEMENT

Sinclair Heights Background: Sinclair Heights, Trombley, and Toivo developments (~300 homes) have been without an alternate/emergency access since the closure of 191st S.E. Our only access is along Rainier View Road S.E. to Chain Lake Road. The East – West Connector mitigation plan remains dormant. The result is delay of traffic at peak hours waiting to join Chain Lake Road. The Rainier View Road is not designed to be an arterial for commercial industry, yet it serves a Peeler Log Post chemical treatment plant off of 191st S.E. near the Monroe Municipal Water Tank. The Rainier View Park located at the intersection of Rainier View Road and Chain Lake Road is a well utilized facility for families of small children during the day. Direct parking is located on the North side of Rainier View Road and on the East side of 199th S.E. Because the intersection is not controlled, left turning vehicles must weave across South bound Chain Lake Road traffic and often are confronted with a parked car with the driver side door opening in front of them. The parked driver has insufficient view of the left turn vehicle and the left turn vehicle must clear South bound Chain Lake Road. Evidence of the short comings of this intersection can be found in the number of parking strip vehicle overruns and trees being uprooted.

Eaglemont Development: The proposed traffic management is to provide alternate/emergency access to the North on PSE&L right of way to Chain Lake Road. The SDA letter of 26 November, 2012, notes that the Eaglemont North access road will alleviate the Emergency access issue. There is no mention of utilizing the North access for construction equipment to prepare the phase one development. There is no apparent mention in the Gibson Traffic Consultants (GTC) analysis of the hazard in the Rainier Park intersection. The GTC analysis 2018 Future Intersection delay for Chain Lake Road and Rainier View Road 1.76 times the 2018 Baseline delay. However, the addition of 146 homes in Eaglemont is a 48% increase of homes now utilizing Rainier View Road. The GTC analysis does not appear to include the compound effect of the 199th S.E. to Rainier View Road and the Rainier View to Chain Lake Road. Adding 199th S.E. flow will compound the Toivo, Trombley, Sinclair Heights delay. The GTC conclusion that “no mitigation in the interest of reduced traffic congestion” appears to be based on average statistics rather than observations of local conditions.

Rainier View Road Traffic Accident Prediction: During Eaglemont Phase One construction, extra long double dump, Bulldozer/Excavator Trailer, Cement, and home material trucks will collide with parked cars, and block access during their “S” maneuver (see figure RV2CL-1,-2). During Eaglemont Phase One construction, the mixture of heavy trucks and park pedestrians at the uncontrolled intersection will lead to injury (see figure RV2CL-3)

Rainier View Road Emergency Delay Prediction: The addition of Eaglemont residence on Rainier View Road will delay First Responders and evacuees.

Mitigation of Rainier View Road congestion: Complete the North access road to Eaglemont and require construction equipment use the North access as the primary access for construction. Install signal controls at Rainier View Road and Chain Lake Road intersection. The \$304,407 fee noted in pg 14 is probably not enough.

Appendix:**Storm Water Calculations –**

Lots 1 -146	=	845,554 sqft.	
Max Lot Coverage	=		60%
Lot Coverage	=	507,332 sqft.	
Road Coverage	=	315,173 sqft.	
Total Coverage	=	822,505 sqft.	
South Basin area	=	31.4 acres	= 89.9 %
South Basin Coverage	=	739,431 sqft.	
8 " precipitation	=		.67 ft
Volume	=	495,419 sqft.	= 66,232 gal.
3 days	=		72 hr.
South Detention EO flow rate	=	919.8 gal/hr	

Traffic Calculations –

GTC Table 3 Chain Lake & Rainier View delay – 2012 exist	=	11.4 sec
GTC Table 3 Chain Lake & Rainier View delay – 2018 future	=	14.6 sec
Chain Lake & Rainier View increase	=	1.76
# Sinclair Heights + Trombley + Toivo homes	~	300
# Eaglemont homes	=	146
% of homes increase	=	48 %

Figures:	pg 5-15
SH Tracts 992, 993	pg 5-,6
SH Tracts 998	pg 7-10
SH Tracts 997	pg 11-12
SH Tracts 996	pg 13
RV2CL 1-3	pg 14-15

992-1



992-2



993-1



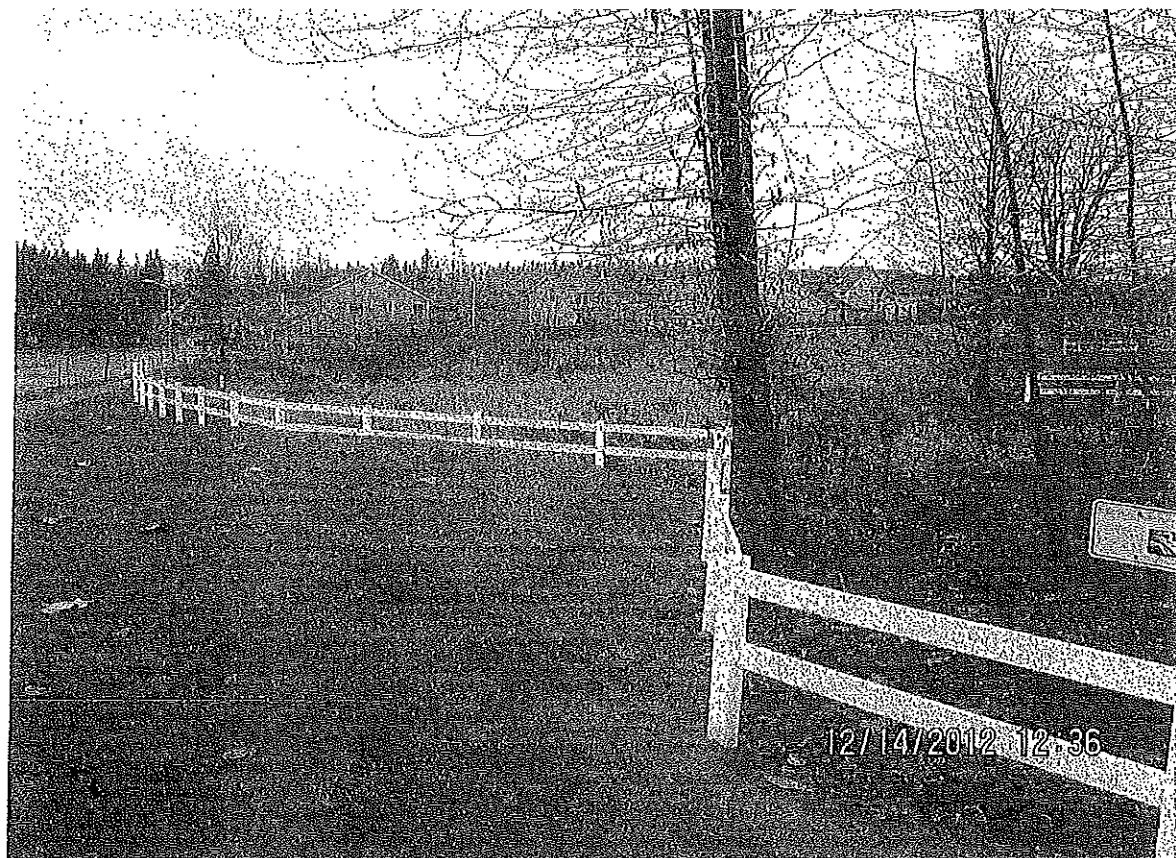
998-1



998-2



998-3



998-4



pg 8

998-5



998-6



pg 9

998-7



997-1



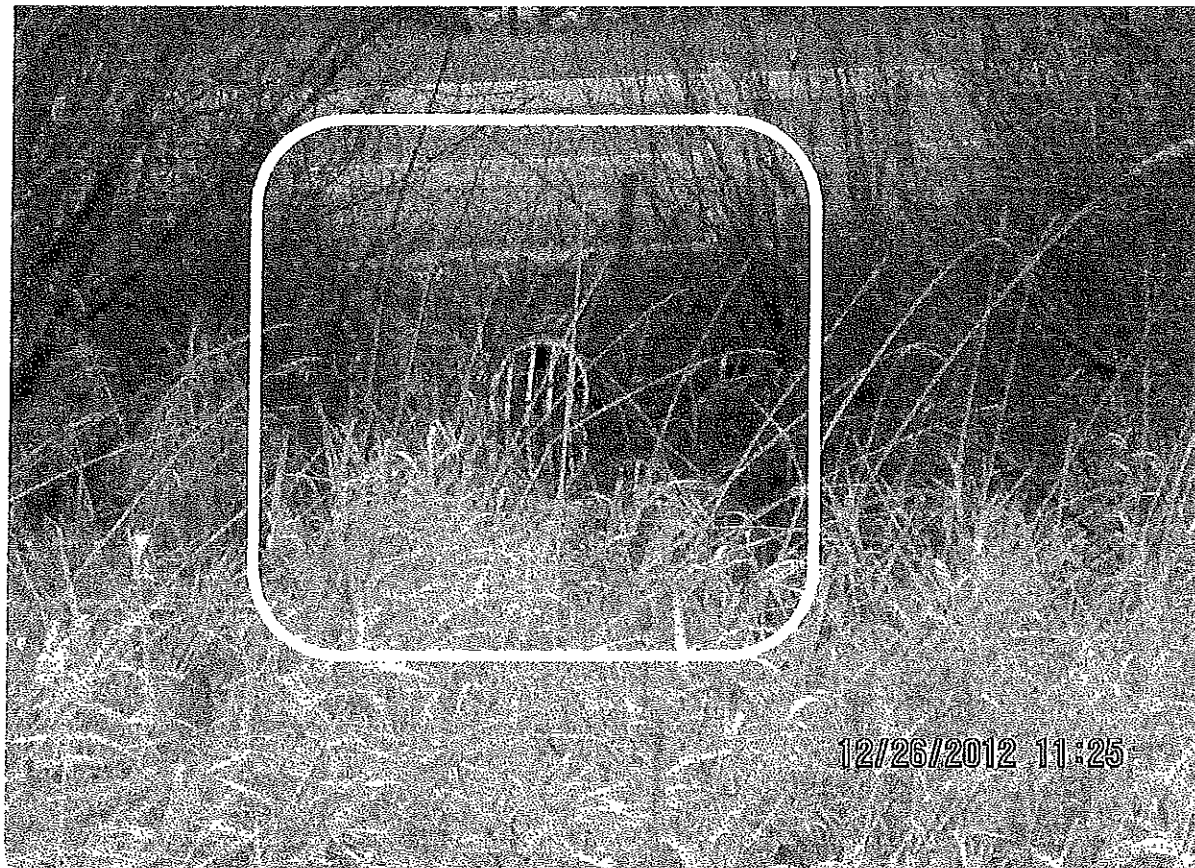
997-2



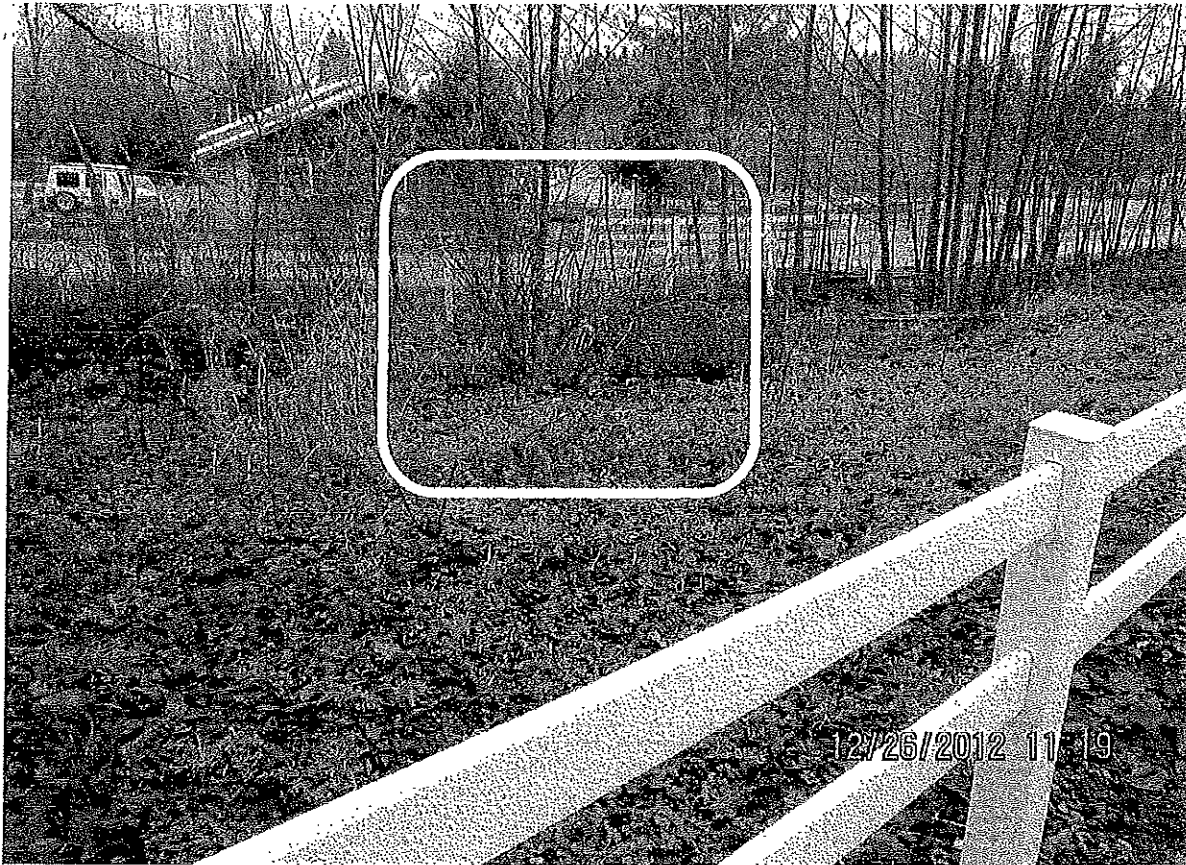
997-3



997-4



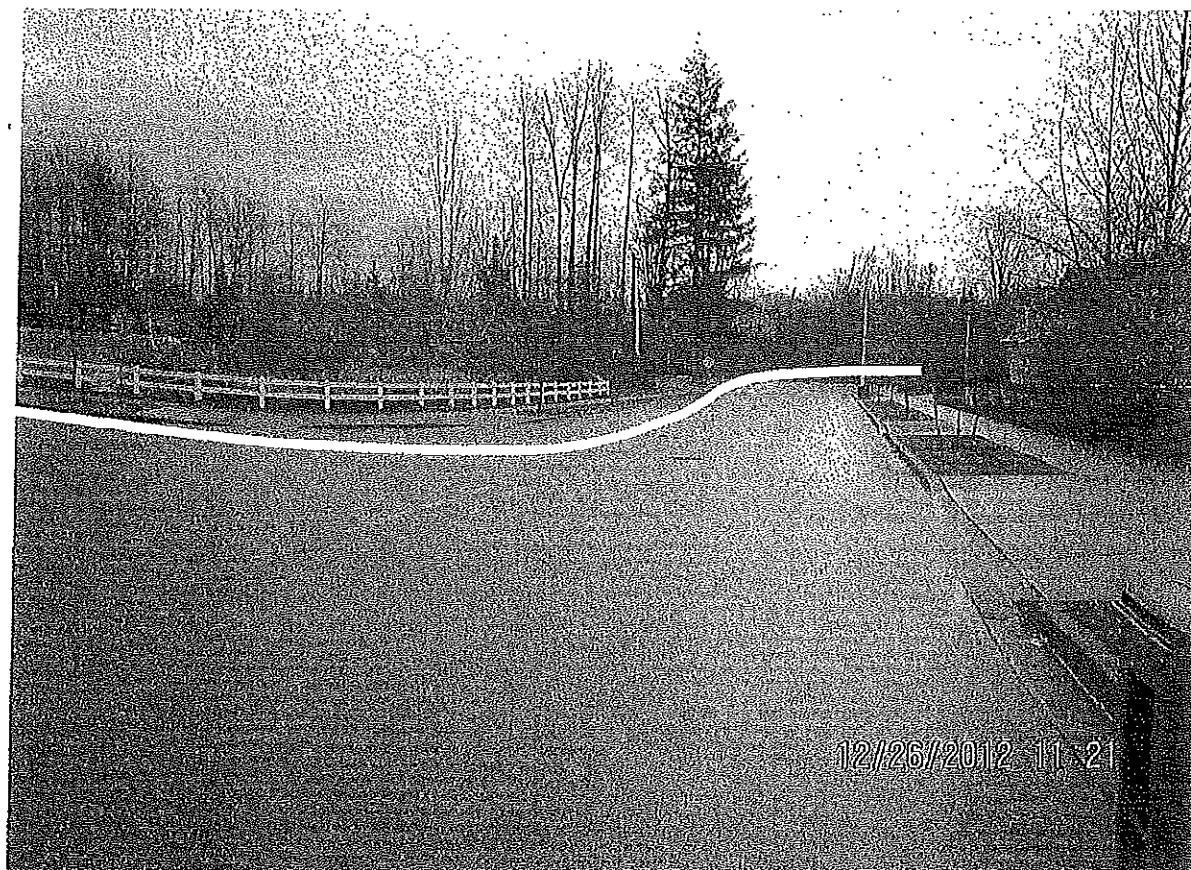
996-1



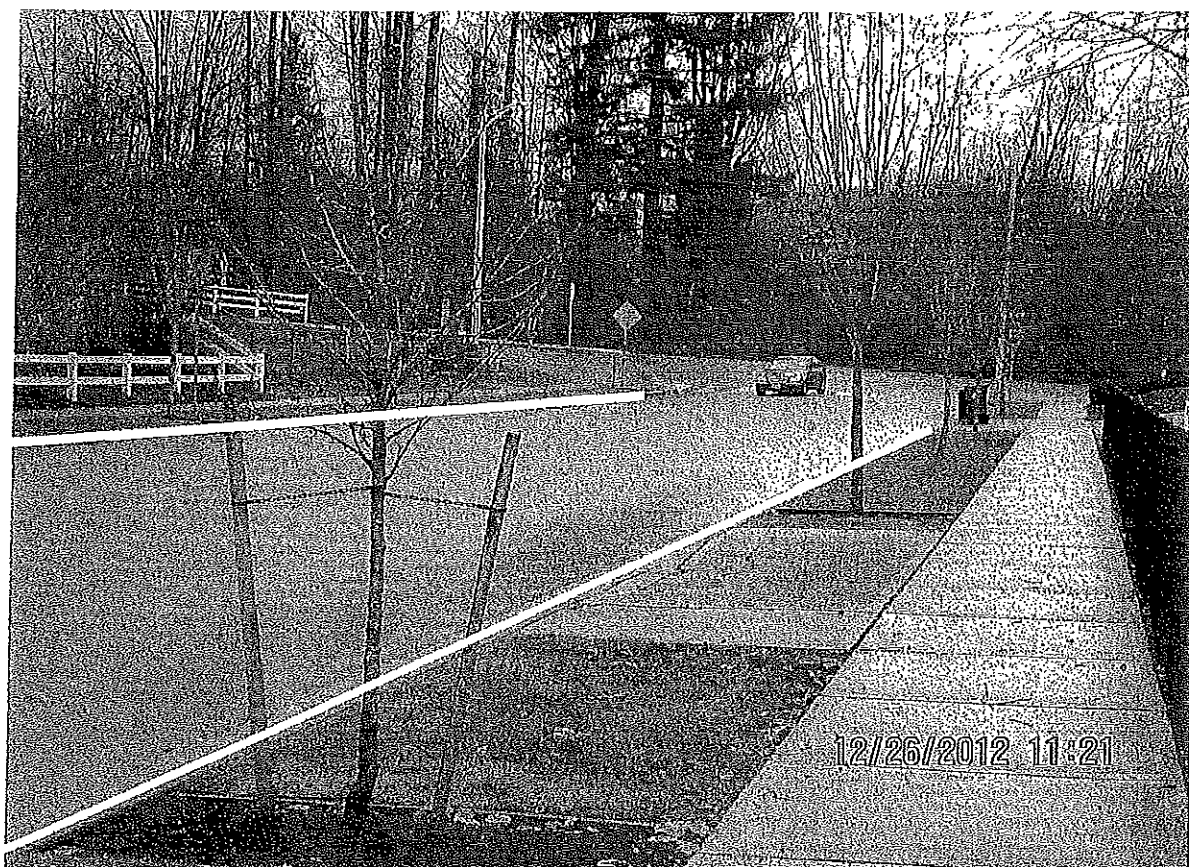
996-2



RV2CL-1



RV2CL-2



RV2CL-3

